Indiana Crop & Weather Report

United States Dept of Agriculture

Indiana Agricultural Statistics Service
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CROP REPORT FOR WEEK ENDING JULY 7

AGRICULTURAL SUMMARY

Hot, dry weather with day time temperatures reaching into the 90 degree range placed stress on major crops and livestock during the week, according to the Indiana Agricultural Statistics Service. In many fields, corn leaves were rolling and soybean plants were showing effects from the heat and lack of rain. There was virtually no precipitation around the state, except for isolated showers in a few northwestern areas. Winter wheat harvest was in full swing in the central region and gaining momentum in the northern areas of the state. Cutting and baling hay along with spraying soybean fields for weed control made good progress during the week. Pastures are drying out rapidly.

FIELD CROPS REPORT

There were 6.9 **days suitable for fieldwork**. Corn **condition** declined and is rated 48 percent good to excellent compared with 62 percent last week and 78 percent last year at this time. Planting of double crop soybeans was winding up in most of the southern regions last week. Soybean **condition** is rated 51 percent good to excellent compared with 61 percent last week and 66 percent a year earlier. Six percent of the soybean acreage is **blooming** compared with 25 percent last year and 23 percent for the 5-year average.

Other activities during the week included mowing roads and pastures, cleaning up and repairing equipment, scouting fields, baling straw, cultivating row crops, moving grain to market, cleaning grain bins and taking care of livestock.

Winter wheat **condition** is rated 50 percent good to excellent, unchanged from a week earlier, but below the 69 percent a year ago at this time. Wheat **harvest** is 65 percent complete compared with 63 percent last year and 61 percent for the 5-year average. By area, 15 percent of the wheat acreage is harvested in the north, 76 percent in the central regions and 96 percent in the south.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is rated 3 percent excellent, 44 percent good, 38 percent fair, 12 percent poor and 3 percent very poor. Second cutting of **alfalfa** hay is 25 percent complete compared with 37 percent last year and 38 percent for the average. Transplanting of **tobacco** is virtually complete. Livestock were under stress due to the hot temperatures and flies were also a problem.

CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
		Percent		
Corn Silked	2	0	20	13
Soybeans Blooming	6	3	25	23
Winter Wheat Harvested	65	42	63	61
Alfalfa Second Cutting	25	NA	37	38

CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excel-lent
			Percent		
Corn	4	12	36	42	6
Soybean	2	12	35	46	5
Pasture	3	12	38	44	3
Winter Wheat 2002	2	14	34	43	7

SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
		Percent	
Topsoil			
Very Short	20	4	4
Short	42	21	12
Adequate	36	64	72
Surplus	2	11	12
Subsoil			
Very Short	7	1	6
Short	34	11	15
Adequate	55	74	71
Surplus	4	14	8
Days Suitable	6.9	5.5	4.5

CONTACT INFORMATION

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--Bud Bever, Agricultural Statistician
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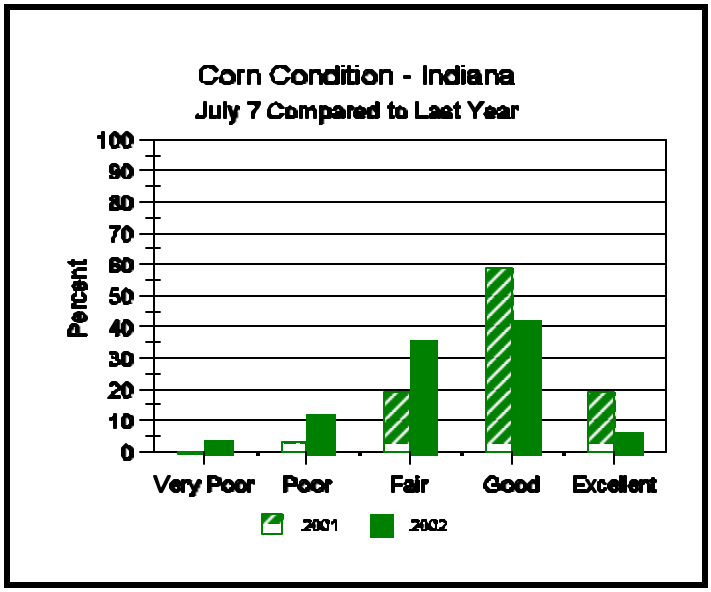
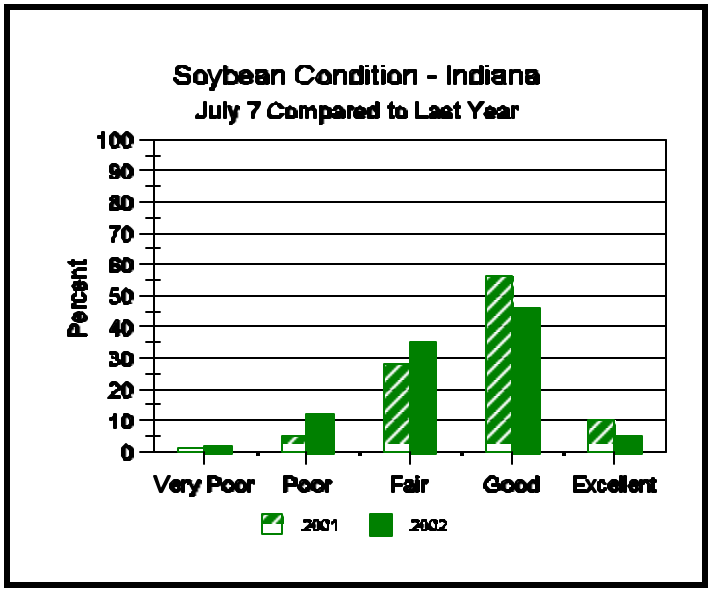
http://www.nass.usda.gov/in/index.htm

Crop Progress





Other Agricultural Comments And News

Soybean Aphid in Indiana

- Aphids are moving from winter to summer host
- Brief information on biology and damage given
- Checklist of considerations before treating
- Many insecticides, if applied properly, should control soybean aphid

Soybean aphid, *Aphis glycines* Matsumura, was found on June 18 at the Agronomy Research Center, Tippecanoe County, on V3 soybean plants. This indicates that soybean aphids are now moving from their winter host, buckthorn, onto their summer one, soybean. This is our first observation, not an alert of an economic infestation. States in the northern Corn Belt observed this movement about one week earlier than we did. Groups attending Diagnostic Training Center sessions at the Agronomy Research Center looked for aphids as part of their training activity, but only ONE was found among such critters as thrips, spider mites, and whiteflies.

Soybean aphid has a very complicated lifecycle. Simply put, female aphids feed-on and reproduce in the summer on soybean. Females give birth to female off-spring, so aphid numbers can increase quickly on soybean (it is estimated that populations can double every 2-1/2 days). In the fall, as temperatures drop and days grow shorter, a generation of winged females and males are produced. Both migrate from soybean to their over-wintering host plant *Rhamnus*, a shrubby tree also known as buckthorn. Eggs are laid on buckthorn, which over-winter and hatch in the spring. Aphids emerging in the spring are females. After several generations on the overwintering host, winged spring migrants fly to soybean to establish new colonies.

The soybean aphid feeds by using a needle-like, sucking mouthpart to remove plant sap. Plant damage occurs from large numbers of aphids removing a significant amount of water and nutrients as they feed on leaves and stems. Some isolated fields in east central Indiana, in 2001 had plants that were covered with aphids, and leaves that were curled and wilted. Leaves on the bottom-third of plants were covered with shed aphid skins (resembling white powder) and aphid secreted honeydew, both of which are signs of aphid presence. Gray sooty mold growing on the honeydew, also covered these leaves. Plants covered with aphids were often stunted when compared to plants from other parts of the field. In some cases, heavily infested plants showed dramatic leaf yellowing. This yellowing may have been associated with potassium (K) deficiency, because symptoms can be more pronounced in fields where both high numbers of aphids and deficient levels of K are found.

It is too early to speculate on how severe the infestations will be in the Midwest, much less Indiana, for this season. Considerable time and effort has been and will be devoted to this pest throughout the Corn Belt because of its potential economic impact on soybeans. Indiana has had minimal crop damage due to this aphid since its discovery in 2000. Therefore, our expertise in this area relies heavily on what we read and hear from colleagues in neighboring states. Many pest managers are asking about thresholds for this insect in case outbreaks occur. Christina DiFonzo, Michigan State University Entomologist, put together a treatment decision "checklist" this past winter. Her checklist follows:

"**Aphid distribution**: Aphids on leaves and stems. When aphids begin to move from the undersides of leaves onto stems, the population is large and increasing. Aphids on stems generally are easy to see without a hand lens.

(Continued on Page 4)

Weather Information Table

Week ending Sunday July 7, 2002

Station	Past Week Weather Summary Data							Accumulation April 1, 2002 thru July 7, 2002				
	Air Temperature				Precip.		Avg 4 in Soil	Precipitation			GDD Base 50°F	
	Hi	Lo	Avg	DFN	Total	Days	Temp	Total	DFN	Days	Total	DFN
Northwest (1)												
Chalmers_5W	98	61	80	+7	0.00	0		10.77	-1.34	42	1315	+15
Valparaiso_AP_I	95	61	79	+7	0.83	1		12.29	-0.72	37	1295	+154
Wanatah	96	59	79	+8	0.50	1	85	11.95	-0.43	40	1226	+142
Wheatfield	94	59	79	+7	0.00	0		11.06	-1.19	33	1258	+141
Winamac	95	60	79	+7	0.00	0	85	11.27	-1.04	40	1242	+65
North Central(2)												
Plymouth	94	60	79	+6	0.00	0		12.81	-0.03	41	1180	-48
South_Bend	94	61	79	+7	0.00	0		10.21	-1.85	39	1238	+114
Young_America	93	60	78	+6	0.00	0		12.52	+0.70	37	1337	+143
Northeast (3)												
Columbia_City	92	57	76	+5	0.00	0	81	11.09	-1.06	39	1154	+88
Fort_Wayne	94	59	78	+6	0.00	0		13.17	+1.95	36	1298	+115
West Central (4)												
Greencastle	92	58	76	+2	0.00	0		18.71	+5.39	39	1283	-99
Perrysville	94	63	79	+5	0.00	0	81	17.25	+4.11	40	1382	+99
Spencer_Ag	93	62	78	+5	0.00	0		19.67	+5.78	43	1365	+85
Terre_Haute_AFB	95	60	79	+5	0.00	0		25.23	+12.24	42	1526	+150
W_Lafayette_6NW	94	61	79	+7	0.00	0	86	16.87	+4.72	46	1367	+166
Central (5)												
Eagle_Creek_AP	93	63	80	+6	0.00	0		16.58	+4.43	42	1472	+109
Greenfield	93	60	79	+5	0.00	0		20.52	+7.56	45	1391	+104
Indianapolis_AP	93	66	80	+6	0.00	0		16.22	+4.07	38	1532	+169
Indianapolis_SE	92	61	78	+4	0.00	0		19.52	+7.11	38	1381	+43
Tipton_Ag	93	58	78	+6	0.00	0	82	13.88	+1.76	38	1267	+111
East Central (6)												
Farmland	94	55	78	+6	0.00	0	80	13.09	+0.71	43	1317	+202
New_Castle	90	56	75	+4	0.00	0		16.43	+3.02	34	1143	-2
Southwest (7)												
Evansville	96	63	82	+4	0.00	0		17.15	+4.00	33	1808	+173
Freelandville	95	66	82	+7	0.00	0		17.81	+4.26	33	1604	+170
Shoals	95	61	80	+5	0.00	0		19.34	+4.86	34	1506	+134
Stendal	95	64	81	+5	0.00	0		19.69	+4.96	33	1667	+148
Vincennes_5NE	96	64	81	+6	0.00	0	81	19.47	+5.92	35	1638	+204
South Central(8)												
Leavenworth	94	63	80	+6	0.00	0		16.68	+2.03	30	1609	+236
Oolitic	93	63	79	+6	0.00	0	84	22.34	+8.58	42	1455	+157
Tell_City	97	65	83	+7	0.00	0		17.82	+3.07	26	1893	+358
Southeast (9)												
Brookville	98	59	80	+8	0.00	0		17.99	+4.95	35	1468	+263
Milan_5NE	91	57	76	+3	0.00	0		23.41	+10.37	42	1256	+51
Scottsburg	95	55	78	+3	0.00	0		19.49	+6.06	38	1494	+72

DFN = Departure From Normal (Using 1961-90 Normals Period).
GDD = Growing Degree Days.
Precipitation (Rainfall or melted snow/ice) in inches.
Precipitation Days = Days with precip of .01 inch or more.
Air Temperatures in Degrees Fahrenheit.

The above weather information is provided by AWIS, Inc.
For detailed ag weather forecasts and data visit the AWIS home page at
www.awis.com or call toll free at 1-888-798-9955.

Soybean Aphid in Indiana (Continued)

Aphid number: Leaflet rating of at least 3.0. The leaflet rating is fairly quick and easy to do, and will allow you to assess aphid numbers after treatment. A rating of a 3.0 is a minimum of 25 aphids on every leaflet of the plant.

Plant appearance: Honeydew (sticky substance) on plants. Honeydew is a sugary substance secreted by aphids as they feed. It is mainly an annoyance, although it promotes the growth of gray sooty mold on leaf surfaces. Honeydew is a sign aphid numbers are large.

Aphid appearance: Healthy. Aphid-infesting fungi already exist in your fields, in the soil and on plant surfaces. These fungi specifically attack and infect aphids and can crash the aphid population in a field in a matter of days. Infected aphids are pinkish, white, or tan, and fuzzy from the growth of fungi out of their bodies. When weather conditions are favorable, the fungi can infest and control aphids quickly. Once a fungal infection starts, an insecticide spray may not be needed.

Weather conditions: Warm and dry. Aphid pathogenic fungi reduce aphid numbers best in warm, humid weather. Under dry conditions, these fungi cannot infect aphids. When thinking about aphids and weather, think about the same conditions favorable for spider mite infestation in soybean.

Timing: July. June is likely too early to assess aphid populations and make a spray decision. August is probably too late to get the most yield advantage from treatment.

Plant stage: Flowering and early pod development. Flowering and early pod fill seem to be critical times for aphid control. Large numbers of aphid feeding on the plant may cause flowers and pods to abort. Also, there is Minnesota data showing that node number was reduced by large numbers of aphids. Spraying too late in the season, once pods are formed, is probably too late to get the most yield advantage from treatment."

As well, predatory insects, especially lady beetle adults and larvae, lacewing larvae, and syrphid fly larvae, have been very abundant in infested fields and should provide some control, if present. Parasitic wasps, which lay eggs directly into aphids, have been less abundant, but still present. In addition to the above mentioned pathogenic fungi, these biocontrol agents have the potential to dramatically reduce aphid numbers in Indiana to below economic levels.

Efficacy trials conducted by Michigan State and Minnesota demonstrated that many products control aphids in soybean. Complete coverage on the foliage, as with spider mites, seems to be the key. Last year, on-farm trials conducted in Michigan yielded from 2 to 24 bushels better than the untreated. Yield benefits decreased the later applications were applied in the season.

Further information with many color pictures can be found in extension publication E-217, *Soybean Aphid* (new May 2001). A hard copy of this publication can be obtained by calling 1888-EXT-INFO or an electronic copy viewed at <http://www.entm.purdue.edu/entomology/ext/targets/e-series/e-list.htm>.

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